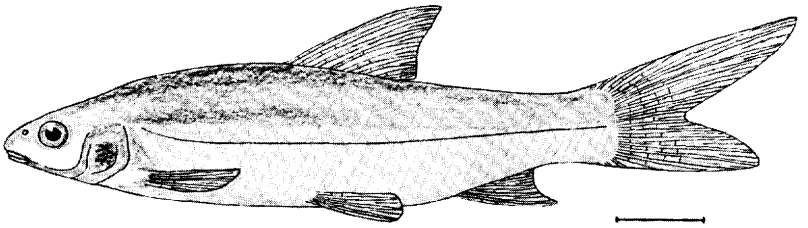
SPLITTAIL
Pogonichthys macrolepidotus

Pogonichthys = beard fish
macrolepidotus = large scales



DISTINGUISHING CHARACTERISTICS

The splittail is a large-scaled, slender minnow. It has a small head with one barbel on each end of the upper jaw. The upper lobe of the tail is noticeably longer than the lower. The throat teeth are 2, 5-5, 2, hooked, and with well-marked grinding surfaces.

DISTRIBUTION IN CALIFORNIA

The range is the lower Sacramento and San Joaquin rivers and the Russian River. It is now rare in Clear Lake, Lake County, where it was once common.

GENERAL INFORMATION

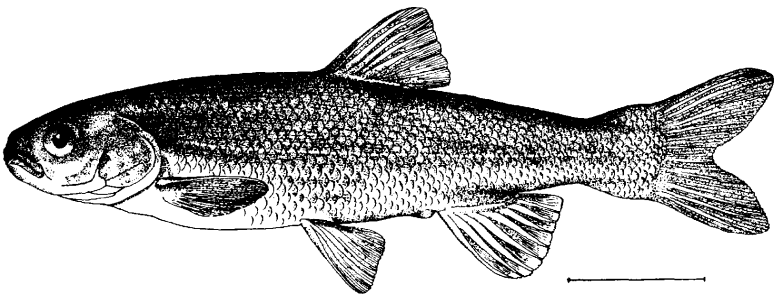
The splittail inhabits the lower portions of the larger rivers and moves readily into brackish water. No work has been done on its food habits, but, from the appearance of its throat teeth, gill rakers, and intestinal tract, it probably feeds on insects and plankton. It reportedly spawns in the early spring.

IMPORTANCE

It is of minor importance as a forage species. Small numbers are taken by commercial fishermen in the Sacramento-San Joaquin Delta area, 1,580 pounds being reported in 1962.

LAHONTAN REDSIDE
Richardsonius egregius

Richardsonius = in honor of Sir John Richardson
egregius = surprising, elegant



DISTINGUISHING CHARACTERISTICS

This is a small minnow with a terminal, downward slanting mouth that reaches to a point even with the front of the eye. A dark stripe along the side is characteristic. A parallel pink or red band is especially prominent during the spawning season. Pharyngeal teeth are 2, 5-4, 2, without grinding surfaces.

DISTRIBUTION IN CALIFORNIA

The redside is found in certain of the higher elevation streams and lakes from the American River northward, and in streams draining into Nevada.

GENERAL INFORMATION

Its food probably consists mainly of small aquatic organisms, such as insect larvae and adults. It is primarily a stream spawner, but upon occasion may spawn in lakes. Spawning takes place in the spring. It has been reported to hybridize with the chub in Lake Tahoe.

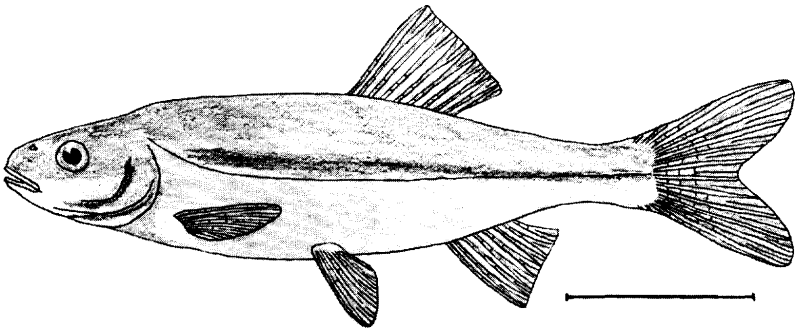
IMPORTANCE

This species competes directly with small trout for food. It provides forage for larger trout, and is used for bait in Lake Tahoe.

WESTERN ROACH

Hesperoleucus symmetricus

Hesperoleucus = white evening star
symmetricus = symmetrical



DISTINGUISHING CHARACTERISTICS

The western roach rarely exceeds five inches in length. The head and eyes are large. The mouth is small and low. The dorsal fin is set well back. The throat teeth are 4-5, narrow, with well-developed grinding surfaces and slightly hooked tips.

DISTRIBUTION IN CALIFORNIA

There are six roaches in California, all very similar in appearance:

Sacramento western roach, *Hesperoleucus symmetricus symmetricus*, in the Sacramento-San Joaquin drainage.

Monterey western roach, *Hesperoleucus symmetricus subditis* (*subditis* = pair below), in streams tributary to Monterey Bay.

Northern roach, *Hesperoleucus mitrulus* (*mitrulus* = a cap), in streams tributary to Goose Lake, Modoc County.

Venus roach, *Hesperoleucus venustus* (*venustus* = akin to Venus), in the Russian River and streams tributary to San Francisco Bay.

Navarro roach, *Hesperoleucus navarroensis* (*navarroensis* = the Navarro River), in the Navarro River, Mendocino County.

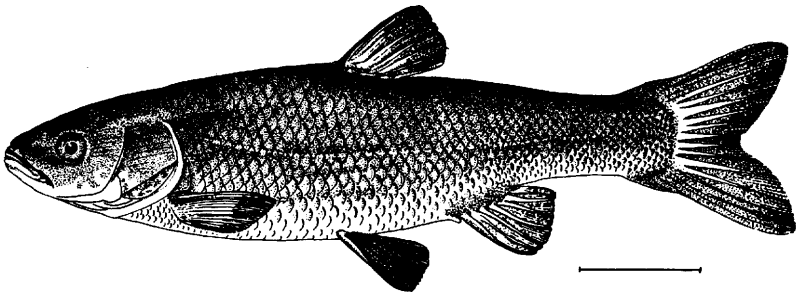
Gualala roach, *Hesperoleucus parvipinnis* (*parvipinnis* = small wing; i.e., fin), in the Gualala River, Mendocino and Sonoma counties.

GENERAL INFORMATION

Small stream dwellers, roach spawn in the early spring, depositing several hundred to nearly a thousand adhesive eggs, in shallow water over rocks or large gravel. They feed primarily on insects and crustaceans, but will take algae. In Coyote Creek, Santa Clara County, roach grow about one inch a year.

TUI CHUB
Siphateles bicolor

Siphateles = far
bicolor = two-colored



DISTINGUISHING CHARACTERISTICS

This minnow varies in size. Large specimens (10 inches) tend to be heavy and robust. The head is large and conical, but somewhat flattened on the sides. Small specimens tend to be slender and generally streamlined. The caudal peduncle is heavy.

The color is also variable, but tends toward olive green above and white to yellow-white below. Brassy green and occasionally silvery green dorsal areas are seen.

Pharyngeal teeth are in one row, 4-5 or 5-4 or 5-5.

DISTRIBUTION IN CALIFORNIA

Four subspecies occur in California:

Klamath tui chub, *Siphateles bicolor bicolor*, in the Klamath River drainage.

Sacramento tui chub, *Siphateles bicolor formosus* (*formosus* = beautiful), in the Sacramento-San Joaquin River drainage.

Coarseraker tui chub, *Siphateles bicolor obesus* (*obesus* = fat), in east slope of the Sierra Nevada drainages north of Mono County.

Fineraker tui chub, *Siphateles bicolor pectinifer* (*pectinifer* = comb-like, i.e., pertaining to the gill rakers), in east slope waters of the Sierra Nevada north of Mono County.

GENERAL INFORMATION

Food consists of plankton, insects, some plant material, and small organisms such as fish larvae.

The tui chub inhabits lakes and the quiet waters of larger streams, frequently traveling in large schools. Spawning occurs in the spring when water temperatures reach about 60 degrees F. The eggs are adhesive.

Where adequate checks, such as predation, do not exist, the species readily overpopulates.

IMPORTANCE

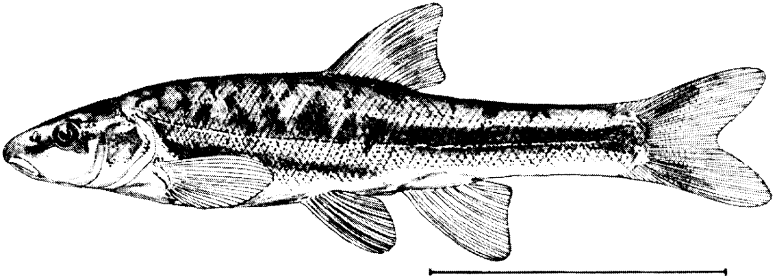
The tui chub is one of the most serious competitors of trout in lakes. It may provide forage for black bass, and occasionally for large trout. There was once a commercial fishery for this species in Eagle Lake, Lassen County.

RELATED SPECIES

The Mohave chub, *Siphateles mohavensis* (mohavensis = Mojave River), resembles the tui chub. It occurs in the Mojave River, San Bernardino County, where it is quite rare.

SPECKLED DACE
Rhinichthys osculus

Rhinichthys = snout fish
osculus = small mouthed



DISTINGUISHING CHARACTERISTICS

The speckled dace is a small, slender minnow, with a stout tail, a small mouth slightly under a pointed nose, and small scales. It is variable in color, ranging from brownish to yellowish green, with darker blotches on the side. The blotches often form an untidy lateral band. During spawning, the fins have reddish tints. The pharyngeal teeth are 1 or 2, 4-4, 2 or 1, are hooked, and have a grinding surface.

DISTRIBUTION IN CALIFORNIA

Four subspecies are found in California:

Lahontan speckled dace, *Rhinichthys osculus robustus* (*robustus* = stout), in east slope of the Sierra Nevada drainages.

Pacific speckled dace, *Rhinichthys osculus carringtonii* (*carringtonii* = for Campbell Carrington), in the Sacramento-San Joaquin River drainage.

Klamath speckled dace, *Rhinichthys osculus klamathensis* (*klamathensis* = Klamath River), in the Klamath River drainage.

Nevada speckled dace, *Rhinichthys osculus nevadensis* (*nevadensis* = of the State of Nevada), restricted in California to Death Valley.

GENERAL INFORMATION

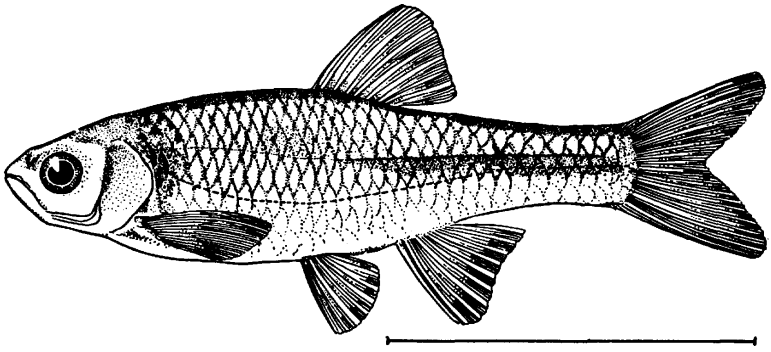
These secretive, small fish are found on riffles in small streams. They feed on bottom materials and small insects. Spawning occurs in the spring, with a few large eggs being deposited in riffle areas or over rocks or gravel. Dace also inhabit the shore areas of lakes where cover in the form of rock and gravel is abundant. They are not schooling fish.

IMPORTANCE

Dace may be of minor importance as forage for large trout. They may compete with fingerling trout for food.

RED SHINER
Notropis lutrensis

Notropis = keel back
lutrensis = otter, i.e., from Offer Creek, Arkansas, where it was first collected.



DISTINGUISHING CHARACTERISTICS

The red shiner is a deep-bodied, robust minnow with a dark back, silvery blue sides, and red fins. It is one of the smallest minnows, rarely growing beyond about three inches. The coloring heightens during the spawning season. The teeth are 4.4, hooked, and sharp-edged or with very narrow grinding surfaces.

DISTRIBUTION IN CALIFORNIA

It was brought into northern California as a bait minnow in **1953,** but proved unsuitable. It is well established in the Colorado River. It is native to the central and southwestern United States in waters draining into the Mississippi and Rio Grande rivers.

GENERAL INFORMATION

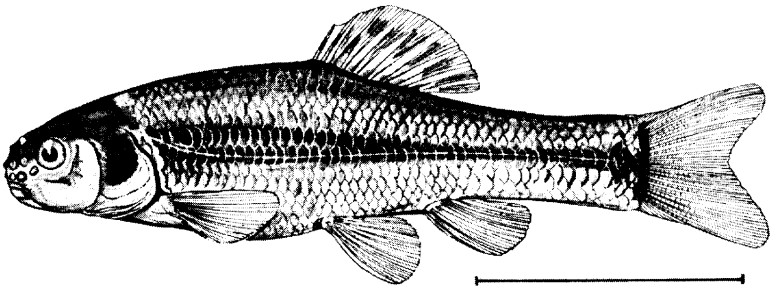
This species spawns on sandy bottoms in shallow water. It requires warmer water than either the fathead minnow or the golden shiner. It does equally well in streams or lakes and tolerates muddy waters.

IMPORTANCE

The red shiner has been used as a bait minnow, and is eaten by game fish.

FATHEAD MINNOW
Pimephales promelas

Pimephales = fathead
promelas = black before



DISTINGUISHING CHARACTERISTICS

A small minnow, it is dark olive above with tinges of brass behind the head and tan along sides. A dusky crossbar usually occurs in the middle of the dorsal fin, with a dark blotch near the base of this fin in breeding males. The head is quite blunt and, in the breeding male, covered with small tubercles. The teeth are 4-4, with oblique grinding surfaces, and usually only one of the teeth is hooked.

DISTRIBUTION IN CALIFORNIA

It was planted into California waters in 1953 as an experimental bait and forage fish. It is raised by commercial bait dealers in the Central Valley.

GENERAL INFORMATION

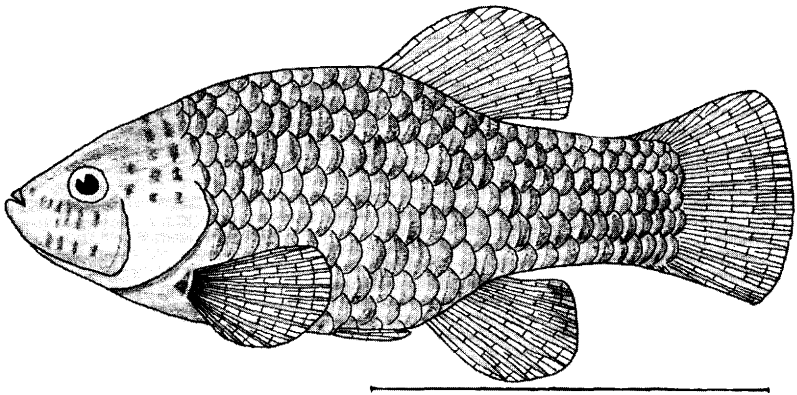
The fathead is a spring spawner. Each female lays several hundred to a thousand eggs on the underside of flat objects, such as boards and rocks. The food consists of microscopic plants and animals and small insects.

IMPORTANCE

It is of considerable importance as a bait fish and is utilized for forage in waters where it is present.

DESERT PUPFISH
Cyprinodon macularius

Cyprinodon =tooth carp
macularius = spotty



DISTINGUISHING CHARACTERISTICS

Pupfish are small, stout members of the killifish family. The terminal mouth is small but well formed, with scissor-like teeth. The snout is short and rounded. The scales are very large. Coloring is variable, from brilliant blue to metallic grey. The belly occasionally shades to silvery white. The sides may or may not be crossed with dark bands.

DISTRIBUTION IN CALIFORNIA

The desert pupfish is confined to the basin of the lower Colorado River and the Salton Sea area.

GENERAL INFORMATION

A belligerent little fish, the pupfish feeds upon small insects, snails, or crustaceans. It can inhabit a wide variety of waters, ranging from fresh to highly saline, and up to 91 degrees F. A large population thrives around the shores of the Salton Sea, Imperial County. Pupfish are often found in warm springs.

IMPORTANCE

The desert pupfish is a unique native species of unusual interest. It is an attractive aquarium fish, but is too belligerent for community tanks.

RELATED SPECIES

One killifish and thrcc other species of pupfish, onc of which has four subspecies, are found in California:

The Saratoga Nevada pupfish, *Cyprinodon nevadensis nevadensis* (*nevadensis* = of the State of Nevada), is found only in the Saratoga Springs area of San Bernardino County in Death Valley National Monument.

The Amargosa Nevada pupfish, *Cyprinodon nevadensis amargosae* (*amargosae* = Amargosa River), is confined to the Amargosa River, San Bernardino County.

The Tecopa Nevada pupfish, *Cyprinodon nevadensis calidae* (*calidae* = hot) is found in Tecopa Hot Springs, Inyo County. Some of these fish were seen in water 104 degrees F. in temperature.

The Shoshone Nevada pupfish, *Cyprinodon nevadensis shoshone* (*shoshone* = place name derived from Shoshone Indian tribe), is found in Shoshone Spring and the outlet creek in Inyo County.

The Salt Creek pupfish, *Cyprinodon salinus* (*salinus* = salty), is found in Salt Creek on the floor of Death Valley.

The Owens Valley pupfish, *Cyprinodon radiosus* (*radiosus* = radii), is restricted to the Owens Valley in Mono and Inyo counties.

The California killfish, *Fundulus parvipinnis* (*Fundulus* = bottom; *parvipinnis* = small fin), inhabits coastal streams of southern California.